

AMENDMENT TO THE CLAIMS

Please amend claims 1-24, 27, 29-34, cancel claim 28, and add new claims 35-40, as follows:

1. (Currently Amended) A method of treating a bacterial infection in a subject, comprising:
Use of
providing a composition comprising a polypeptide, or a derivative or analogue thereof, comprising repeats of a peptide derived from a Heparan Sulphate Proteoglycan (HSPG) receptor binding region of an apolipoprotein for the manufacture of a medicament for the treatment of a bacterial infection; and
administering said composition to said subject.
2. (Currently Amended) The method of Use according to claim 1, wherein the peptide is derived from a ~~Heparan Sulphate Proteoglycan~~ (HSPG) receptor binding region of apolipoprotein B or apolipoprotein E.
3. (Currently Amended) The method of Use according to any preceding claim 1, wherein the peptide is derived from an apolipoprotein B LDL receptor binding domain cluster B, or from an apolipoprotein E LDL receptor binding domain cluster B.
4. (Currently Amended) The method of Use according to any preceding claim 1, wherein the polypeptide comprises at least two RKR motifs.
5. (Currently Amended) The method of Use according to any preceding claim 1, wherein the polypeptide comprises a tandem dimer repeat of: SEQ ID No. 1;₃ SEQ ID No. 2;₃ SEQ ID No. 96;₃ or a derivative thereof wherein at least one amino acid residue, other than RKR motifs, is replaced by an Arginine (R), Tyrosine (Y), Methionine (M), Isoleucine (I), Phenylalanine (F), Tryptophan (W), or a derivative thereof.
6. (Currently Amended) The method of Use according to claim 5, wherein the replaced or substituted residue is the first, second, third, seventh, eighth, ninth, tenth, eleventh, twelfth, sixteenth, seventeenth or eighteenth residue of the polypeptide.

7. (Currently Amended) The method of Use according to either claim 5 or claim 6, wherein the at least one amino acid substitution is a Phenylalanine (F) residue or a Tryptophan (W) residue, or a derivative thereof.

8. (Currently Amended) The method of Use according to any preceding claim 1, wherein the polypeptide has the formula:

$$\{abcRKRxyz\} + \{a'b'c'RKRx'y'z'\}$$
 (formula I), and
 wherein
a and a' are each a & a' = is independently selected from Arginine (R); Tyrosine (Y); Methionine (M); Isoleucine (I); Phenylalanine (F); Tryptophan (W); Leucine (L); Lysine (K); Histidine (H); or are is deleted;
b and b' are each b & b' = is independently selected from Arginine (R); Tyrosine (Y); Methionine (M); Isoleucine (I); Phenylalanine (F); Tryptophan (W); Leucine (L); Lysine (K); or are is deleted;
c and c' are each c & c' = is independently selected from Arginine (R); Tyrosine (Y); Methionine (M); Isoleucine (I); Phenylalanine (F); Tryptophan (W); Leucine (L); Lysine (K); Histidine (H); or Threonine (T); or are is deleted;
x and x' are each x & x' = is independently selected from Arginine (R); Tyrosine (Y); Methionine (M); Isoleucine (I); Phenylalanine (F); Tryptophan (W); Leucine (L); Lysine (K); Histidine (H); or Glycine (G); or are is deleted;
y and y' are each y & y' = is independently selected from Arginine (R); Tyrosine (Y); Methionine (M); Isoleucine (I); Phenylalanine (F); Tryptophan (W); Leucine (L); Lysine (K); Histidine (H); or are is deleted;
z and z' are each z & z' = is independently selected from Arginine (R); Tyrosine (Y); Methionine (M); Isoleucine (I); Phenylalanine (F); Tryptophan (W); Leucine (L); Lysine (K); Histidine (H); or are is deleted.

9. (Currently Amended) The method of Use according to claim 8, wherein the polypeptide comprises at least one additional amino acid, ~~which may be~~ independently selected from Arginine (R); Tyrosine (Y); Methionine (M); Isoleucine (I); Phenylalanine (F); Tryptophan (W); Leucine (L); Lysine (K); Histidine (H), and which additional amino

acid is added before the amino acid at position 'a' in the peptide of formula I at the N-terminal.

10. (Currently Amended) The method of Use according to any preceding claim 1, wherein the polypeptide comprises: a repeat of the peptide apoE₁₄₁₋₁₄₉ (SEQ ID NO. 1) or a truncation thereof; or a repeat of a variant of the peptide apoE₁₄₁₋₁₄₉ in which at least one Leucine (L) residue is replaced by Tryptophan (W), Arginine (R), Lysine (K), Tyrosine (Y) or Phenylalanine (F), ~~for the manufacture of a medicament for the treatment of a bacterial infection.~~
11. (Currently Amended) A method of treating a bacterial infection in a subject, Use of a polypeptide comprising:
providing a composition comprising a polypeptide comprising a repeat of the peptide apoE₁₄₁₋₁₄₉ (SEQ ID NO. 1) or a truncation thereof; or a repeat of a variant of peptide apoE₁₄₁₋₁₄₉ in which at least one Leucine (L) residue is replaced by Tryptophan (W), Arginine (R), Lysine (K), Tyrosine (Y) or Phenylalanine (F) for the manufacture of a medicament for the treatment of a bacterial infection; and
administering said composition to said subject.
12. (Currently Amended) The method of Use according to claim 11, wherein the polypeptide comprises a repeat of apoE₁₄₁₋₁₄₉ (SEQ ID No. 1) or a truncation thereof, characterised in that at least one Leucine (L) residue is replaced by a Tryptophan (W), or a Phenylalanine (F) residue.
13. (Currently Amended) The method of Use according to either claim 11 or claim 12, wherein the tandem repeat comprises at least two substitutions independently selected from Tryptophan (W), Arginine (R), Lysine (K), Tyrosine (Y), or Phenylalanine (F) substitutions.
14. (Currently Amended) The method of Use according to any preceding claim 1, wherein the polypeptide comprises the amino acid sequence: LRKLRKRLLLRKLRKRL (SEQ ID NO. 6); WRKWRKRWWWRKWRKRWW (SEQ ID No. 7); WRKWRKRWRKWRKR (SEQ ID No. 8); WRKWRKRWWLRKLRKRL (SEQ ID

No. 9); YRKYRKRYYYRKYRKRY (SEQ ID No. 10); LRKLRKRLRKLRLR (SEQ ID No. 11); LRKRLRLRKLRLR (SEQ ID No. 3); FRKFRKRFFFRKFRKRFF (SEQ ID No. 48); WRKWRKRWRKWRKRWW (SEQ ID NO. 63); WRKWRKRWRKWRKRWW (SEQ ID NO. 64); WRKWRKRWWFRKWRKRWW (SEQ ID NO. 65); WRKWRKRFFWRKWRKRFF (SEQ ID NO. 66); WRKRWWWRKRWWR (SEQ ID NO. 67); LRKLRKRLRLRKLRLR (SEQ ID NO. 68); WRKWRKRWWWRKWRKRWW (SEQ ID NO. 69); LRKLRKRLWRKWRKRWW (SEQ ID NO. 70); LRKLRKRLRLRKLRLR (SEQ ID NO. 71); LRKLRKRLWRKWRKRLL (SEQ ID NO. 72); WRKWRKRLRLRKLRLR (SEQ ID NO. 73); WRKLRKRLRLRKLRLR (SEQ ID NO. 74); WRKWRKFFFRKWRKRWW (SEQ ID NO. 75); or WRKWRKRWWFRKFRKRFF (SEQ ID NO. 76).

15. (Currently Amended) The method of Use according to any one of claim 1 to 9, wherein the polypeptide comprises repeats of a peptide derived from an HSPG receptor binding region of apoB.
16. (Currently Amended) A method of treating a bacterial infection in a subject, comprising:
Use of
providing a composition comprising a polypeptide, or a derivative or analogue thereof, comprising repeats of a peptide derived from an HSPG receptor binding region of apolipoprotein B for the manufacture of a medicament for the treatment of a bacterial infection; and
administering said composition to said subject.
17. (Currently Amended) The method of Use according to claim 15 or 16, wherein the polypeptide is derived from an apolipoprotein B LDL receptor binding domain cluster B.
18. (Currently Amended) The method of Use according to either claim 16 or claim 17, wherein the polypeptide comprises a repeat of apoB₃₃₅₉₋₃₃₆₇ (SEQ ID No. 2) or a truncation or variant thereof.

19. (Currently Amended) The method of claim 16 ~~Use according to any one of claims 16 to 18,~~ wherein the polypeptide comprises at least two RKR motifs.
20. (Currently Amended) The method of claim 16 ~~Use according to any one of claims 16 to 19,~~ wherein the polypeptide has the sequence of RLTRKRGLKRLTRKRGLK (SEQ ID No. 12) or a truncation thereof wherein at least one amino acid residue, other than the RKR motifs, has been replaced by a Glycine (G), Threonine (T), Histidine (H), Tryptophan (W), Arginine (R) or Leucine (L) residue or derivatives thereof.
21. (Currently Amended) The method of ~~Use according to~~ claim 20, wherein the at least one amino acid residue has been replaced by a Tryptophan (W), Arginine (R) or Leucine (L) residue or derivative thereof.
22. (Currently Amended) The method of claim 16 ~~Use according to any one of claims 16 to 21,~~ wherein the polypeptide has formula:

$$\{abcRKRxyz\} + \{a'b'c'RKRx'y'z'\} \text{ (formula IV)}$$

wherein

a and a' are each ~~a & a' =~~ is independently selected from a positively charged residue, ~~which may be~~ selected from either Arginine (R) or Lysine (K) or Histidine (H); Leucine (L); Tryptophan (W); or are is deleted;

b and b' are each ~~b & b' =~~ is independently selected from Leucine (L); Arginine (R); Lysine (K); or are is deleted;

c and c' are each ~~c & c' =~~ is independently selected from Threonine (T); Tryptophan (W); or a positively charged residue, ~~which may be~~ selected from Arginine (R) or Lysine (K) or Histidine (H);

x and x' are each ~~x & x' =~~ is independently selected from Glycine (G); Tryptophan (W); Leucine (L); or a positively charged residue, ~~which may be~~ selected from Arginine (R) or Lysine (K) or Histidine (H);

y and y' are each ~~y & y' =~~ is independently selected from Leucine (L); a positively charged residue, ~~which may be~~ selected from Arginine (R) or Lysine (K) or Histidine (H); or are is deleted;

z and z' are each z & z' = is independently selected from a positively charged residue, ~~which may be~~ selected from Arginine (R) or Lysine (K) or Histidine (H); or Leucine; or is deleted.

23. (Currently Amended) The method of claim 16 ~~Use according to any one of claims 16 to 22,~~ wherein the polypeptide is: RTRKRGRTRKRGR (SEQ ID No.13); LRKRKRLLRKRKRL (SEQ ID No.14); LRKRKRLRKLKRKRLRK (SEQ ID No.15); WRWRKRWKWRWRKRWK (SEQ ID No.16); LLRKRLKRLLLRKRLKRL (SEQ ID NO. 80); RRWRKRWKWRWRKRWK (SEQ ID No. 83); KRWRKRWKWRWRKRWK SEQ ID No.84); LRWRKRWKWRWRKRWK (SEQ ID No. 85); HRWRKRWKWRWRKRWK (SEQ ID No. 86); RWRKRWKWRWRKRWK (SEQ ID NO.87); RRWRKRWKRRWRKRWK (SEQ ID NO.88); LRWRKRWKLRWRKRWK (SEQ ID No.89); HRWRKRWKHRWRKRWK (SEQ ID No.90); RWRKRWKRWKRWKRWK (SEQ ID NO.91); RWRKRGRKRWKRGRK (SEQ ID No. 92); RWRKRWKRWKRWKRWK SEQ ID No.93); RKRGWKWRKRGWKW (SEQ ID No.94); or RLTRKRGRLTRKRGR (SEQ ID No.95).
24. (Currently Amended) The method of claim 16 ~~Use according to any one of claims 16 to 19,~~ wherein the polypeptide has the sequence of RLTRKRGLKRLTRKRGLK (SEQ ID No.12).
25. (Original) A polypeptide comprising a repeat of the peptide apoE₁₄₁₋₁₄₉ (SEQ ID No.1) or a truncation thereof, characterised in that at least one Leucine (L) residue is replaced by Tyrosine (Y) or Phenylalanine (F).
26. (Original) A polypeptide, derivative or analogue thereof, comprising an amino acid sequence of: SEQ ID No. 3 (GIN 2); SEQ ID No. 4 (GIN 11); SEQ ID No. 67 (MU 81); SEQ ID No. 68 (MU 82); SEQ ID No. 80 (MU 24); SEQ ID No. 94 (MU 73) or SEQ ID No. 95 (MU 74).
27. (Currently Amended) A medicament, comprising a polypeptide ~~Polypeptides according to claim 25 or 26 for use as medicaments.~~

Claim 28 (Canceled).

29. (Currently Amended) The method of claim 1, wherein said bacterial infection is a ~~Use of polypeptides according to any preceding claim for treating~~ *Staphylococcus Pseudomonadales* or *Streptococci* infection ~~infections~~.
30. (Currently Amended) A nucleic acid sequence encoding a polypeptide according to ~~any preceding~~ claim 25.
31. (Currently Amended) A method of preventing and/or treating a bacterial contamination comprising:
providing a composition comprising a polypeptide, or a derivative or analogue thereof, comprising repeats of a peptide derived from a Heparan Sulphate Proteoglycan (HSPG) receptor binding region of an apolipoprotein; and
coating an object or a surface in need thereof with an amount of said composition ~~in an amount a polypeptide according to any preceding claim~~ that is effective for killing or preventing growth of bacteria.
32. (Currently Amended) ~~The~~ A method according to claim 31 wherein said ~~an~~ object is ~~coated and~~ is selected from the group consisting of: medical devices, lenses, contact lenses, catheters, stents, wound healing dressings, contraceptives, surgical implants and replacement joints.
33. (Currently Amended) ~~The~~ A method according to claim 31 wherein ~~a surface is coated and the~~ said surface is selected from the group consisting of: hospital ward surfaces, operating theatre surfaces, kitchen surfaces and sanitary surfaces.
34. (Currently Amended) A contact lens at least partially coated with a peptide, derivative or analogue thereof, comprising repeats of a peptide derived from a Heparan Sulphate Proteoglycan (HSPG) receptor binding region of an apolipoprotein ~~according to any preceding claim~~.
35. (New) The method of claim 11, wherein the polypeptide comprises the amino acid sequence: LRKLRKRLRLRKLRL (SEQ ID NO. 6);

WRKWRKRWWWRKWRKRWW (SEQ ID No. 7); WRKWRKRWRKWRKR (SEQ ID No. 8); WRKWRKRWWLRKLRKRL (SEQ ID No. 9); YRKYRKRYYYRKYRKRY (SEQ ID No. 10); LRKLRKRLRKLRKR (SEQ ID No. 11); LRKRLLRKLRKRL (SEQ ID No. 3); FRKFRKRFFFRKFRKRFF (SEQ ID No. 48); WRKWRKRWWWRKWRKRWW (SEQ ID NO. 63); WRKWRKRWRKWRKRW (SEQ ID NO. 64); WRKWRKRWWFRKWRKRWW (SEQ ID NO. 65); WRKWRKRFFWRKWRKRFF (SEQ ID NO. 66); WRKRWWWRKWRWW (SEQ ID NO. 67); LRKLRKRLRLRKLRKRLR (SEQ ID NO. 68); WRKWRKRWWWRKWRKRWW (SEQ ID NO. 69); LRKLRKRLWRKWRKRWW (SEQ ID NO. 70); LRKLRKRLLRKLRKRWW (SEQ ID NO. 71); LRKLRKRLWRKWRKRLL (SEQ ID NO. 72); WRKWRKRLLLRKLRKRL (SEQ ID NO. 73); WRKLRKRLLRKLRKRL (SEQ ID NO. 74); WRKWRKFFFRKWRKRWW (SEQ ID NO. 75); or WRKWRKRWWFRKFRKRFF (SEQ ID NO. 76).

36. (New) The method of claim 16, wherein the polypeptide is derived from an apolipoprotein B LDL receptor binding domain cluster B.
37. (New) A medicament, comprising a polypeptide according to claim 26.
38. (New) The method of claim 11, wherein said bacterial infection is a *Staphylococcus Pseudomonadales* or *Streptococci* infection.
39. (New) The method of claim 16, wherein said bacterial infection is a *Staphylococcus Pseudomonadales* or *Streptococci* infection.
40. (New) A nucleic acid sequence encoding a polypeptide according to claim 26.